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# A New Species and Taxonomic Note on the Genus *Euconnus* (Coleoptera: Scydmaenidae) from Honshu, Japan

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**Abstract.** A new species, *Euconnus* (*Euconophron*) *kojiroi* sp. nov., is described from Honshu, Japan. *Euconnus* (*Euconophron*) *miyawakianus* Franz, 1976 is synonymized with *Euconnus lewisii* Sharp, 1886.

## Introduction

The genus *Euconnus* Thomson, 1859 is composed of about 2500 species in the world (Newton & Franz, 1998). In Japan, ten species of the genus have been recorded (Sharp, 1874; 1886; Franz, 1976; O'Keefe & Li, 1998; Hoshina et al., 2003; Hoshina & Arai, 2003).

Recently, I collected some specimens of *Euconnus* from Fukui Pref., Honshu, Japan, and had an opportunity to examine type specimens of *Euconnus lewisii* Sharp, 1886 and *Euconnus* (*Euconophron*) *miyawakianus* Franz, 1976. My careful examination showed specimens from Fukui Pref. belong to a new member of *Euconnus*, and *E.* (*E.*) *miyawakianus* is a synonym of *E. lewisii*. In this paper, I will describe the new species under the name, *Euconnus* (*Euconophron*) *kojiroi* sp. nov., and show a taxonomic note of *E. lewisii*.

The holotype designated in this study is deposited in the collection of the Museum of Nature and Human Activities, Hyôgo (MNHA).

I wish to express my sincere gratitude to Dr. Pawel Jalsoszyński (Poland) and Dr. Hiroyuki Sasaji (Fukui Pref.) for their continuing help. I also owe thanks to Dr. Martin Brendell (The Natural History Museum, London) and Dr. Harald Schillhammer (Naturhistorisches Museum, Wien) who kindly provided me with the opportunity to examine the type specimens.

## Tanonomy

***Euconnus* (*Euconophron*) *kojiroi* Hoshina, sp. nov.**

(Japanese name: Kojirô-hime-kokemushi)

(Figs. 1-7)

**Diagnosis.** Body is large sized, densely pubescent and dark reddish brown on dorsum. Hind wings are absent or vestigial.

**Measurement of holotype:** Body 1.9 mm in length; head 0.47 mm in length (from clypeus to base) and 0.39 mm in width; pronotum 0.50 mm in length and width; elytra 1.0 mm in length and 0.84 mm in width.

Body 1.8-1.9 mm in length, about 2.2 times as long as wide (Fig. 1), densely or moderately pubescent.

(Key Words: Coleoptera, Scydmaenidae, the genus *Euconnus*, new species, Japan)

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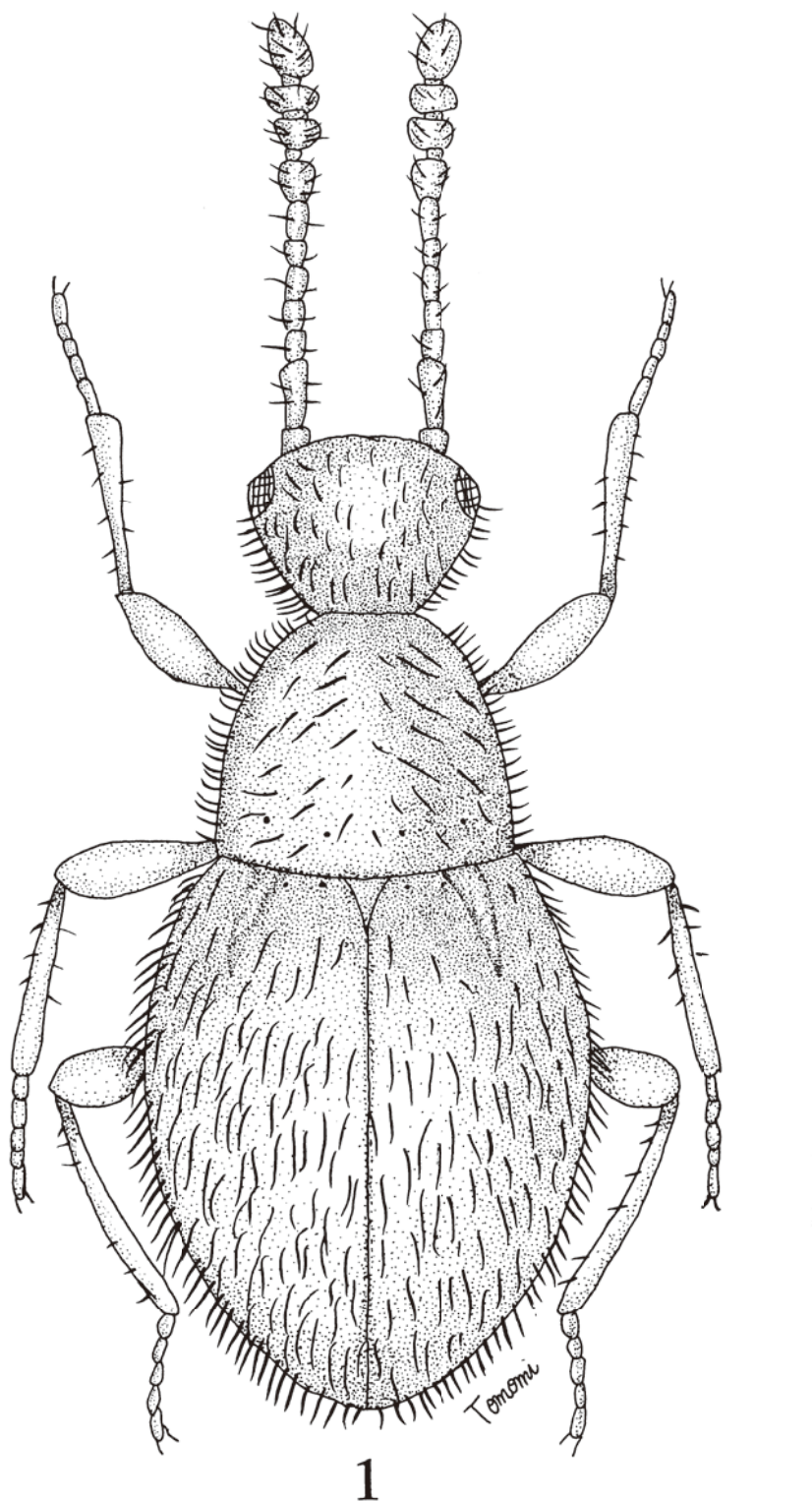
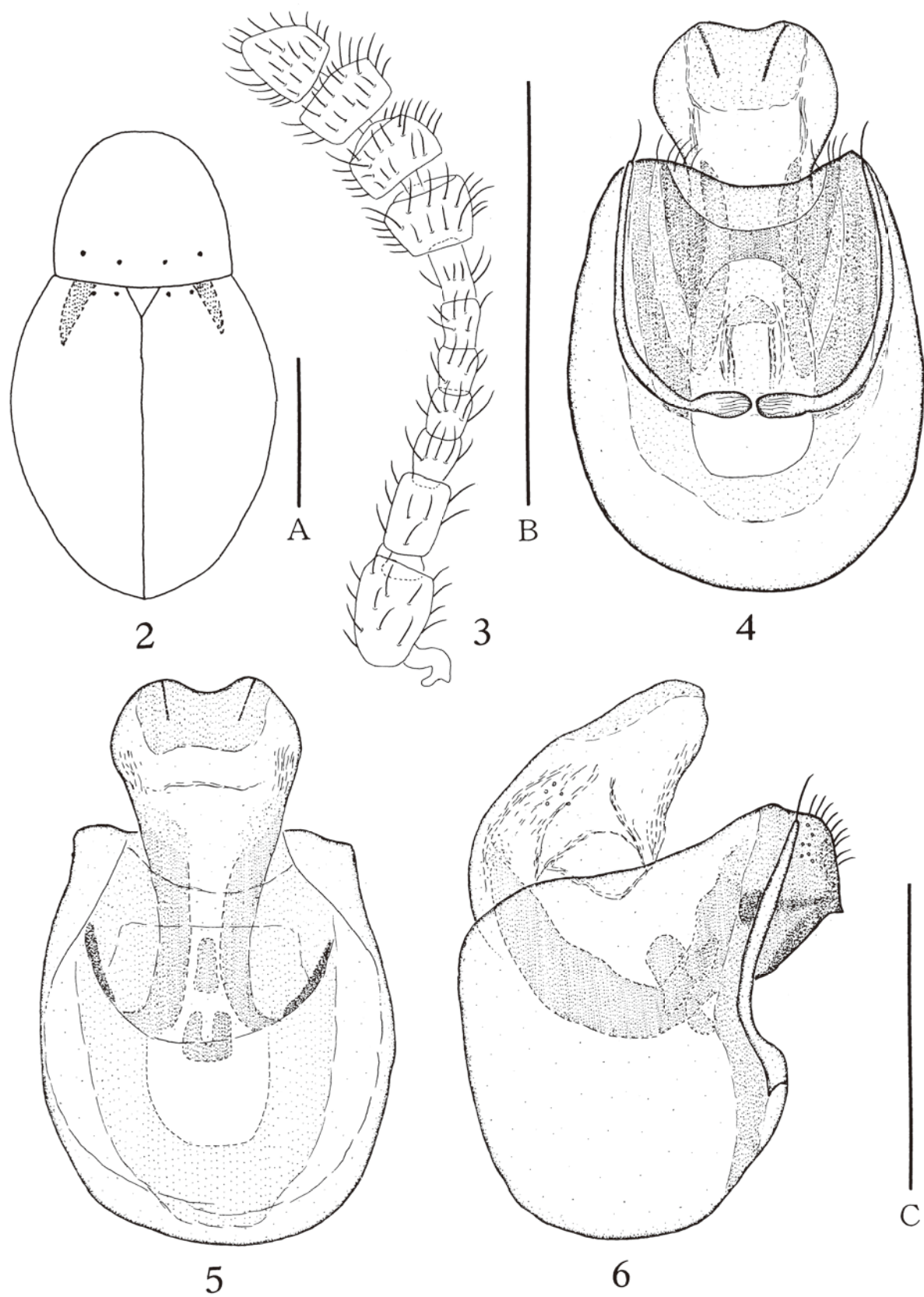


Fig. 1. Habitus of *Euconnus* (*Euconophron*) *kojiroi* sp. nov. Scale: 1 mm.

Coloration. Dorsum of body shining, almost concolorous and dark reddish brown; maxillary palpus light brown; 1st segment of antennae dark reddish brown; 2nd-10th segments reddish brown; 11th segment sometimes a little lighter than 10th; meso- and metasterna and venter dark reddish brown except for a black median



Figs. 2-6. *Euconnus (Euconophron) kojiroi* sp. nov. 2, body. 3, antenna. 4-6, aedeagus. 4, ventral view; 5, dorsal view; 6, lateral view. Scale A: 0.5 mm for Fig. 2. Scale B: 0.5 mm for Fig. 3. Scale C: 0.2 mm for Figs. 4-6.

carina of mesosternum; coxae, trochanters, and femora dark reddish brown; tibiae brown; tarsi slightly lighter than tibiae; pubescence of dorsum golden yellow.

Head hemispherical and convex, sharply narrowed towards the base from eyes along lateral margins, about 1.2 times as long as wide; surface of head almost smooth, bearing dense, stiff, and thick setae along lateral margins and on occiput, sparsely and thinly pubescent on vertex and frons; length of head a little shorter than that of pronotum; width of head about 0.76 times as wide as that of pronotum; eyes small and long-oval, about 3.1 times as long as wide, and about 0.20 times as long as length of head; mentum smooth and impunctate; antennae 0.72–0.84 mm in length and clavate on terminal four segments (Fig. 3); each of 1st–7th antennal segments longer than wide, 8th–10th segments wider than long; 11th segment robust, as long as wide or slightly longer than wide, apically triangular; relative lengths of antennal segments from 1st to 11th segments as follows: 4.7: 3.5: 2.4: 2.2: 2.1: 2.1: 2.7: 2.7: 2.7: 2.5: 3.6.

Pronotum convex in dorsal view (Fig. 1), impunctate, almost smooth, almost as long as wide, widest near base, moderately or sparsely pubescent, with dense, stiff and thick setae along lateral margins; length and width of pronotum about 0.51 times as long as and 0.63 times as wide as those of elytra, respectively; anterior margin almost straight; lateral margins feebly curved from base towards anterior margin; basal four foveae small, external two situated slightly more forward than inner two (Fig. 2); basal transverse groove absent.

Elytra about 1.2 times as long as wide, widest at about basal 2/5 in dorsal view, impunctate, very weakly microreticulate, with dense fine pubescence; each elytron with a basal depression extending to basal 1/5 of elytra and two small basal pits which are located closer to scutellum than lateral margins; distance between pits narrower than that of basal foveae of pronotum, and external pits situated more innerly than external foveae of pronotum; sutural striae absent.

Hind wings normal or vestigial.

Legs not showing sexual dimorphism; hind coxae distant from each other at intervals of 2/5 of length of hind coxae; front tibiae almost as long as middle tibiae; hind tibiae about 1.2 times as long as front tibiae; all tibiae sticky, weakly narrowed from about basal 1/3 or 2/5 position towards the base.

Metasternum sparsely pubescent, smooth, impunctate, and convex; venter densely pubescent and weakly microreticulate.

Male. Aedeagus robust (Figs. 4–6), length of median lobe about 0.29 mm and width 0.23 mm in ventral and dorsal views; median lobe emarginated along apical margins in ventral view, feebly curved along lateral margins in ventral and dorsal views, ventrally expanded from apical 2/5 to apex in lateral view; each paramere slender, curved in an arc in ventral view (Fig. 4); inner sac complex.

Distribution. Japan: Honshu (Fukui Pref.).

Type series. Holotype: male, Ichijō-daki Falls, Fukui City, Fukui Pref., 4. vi. 2002, H. Hoshina leg. (MNHA). Paratypes: 2 males and 1 female, same data as the holotype.

Remarks. *Euconnus* (*Euconophron*) *kojiroi* sp. nov. can be easily distinguished from the other Japanese species of *Euconnus* based on the dark reddish brown dorsum and large body. Other species of *Euconnus* are less than 1.8 mm, and generally brown or reddish brown on dorsum. The present new species is similar to *Euconnus lewisii* Sharp, 1886, but separated from it by having pronotum with relatively smaller basal foveae than those of *E. lewisii*.

Hind wings of *E. (Euconophron) kojiroi* sp. nov. are divided into two types. One female has vestigial hind wings and other males have normal ones. However, I can not conclude that hind wings show sexual dimorphism because only four specimens of this species were examined.

Note. The definitions of many subgenera of *Euconnus* are not established well. Therefore many species of *Euconnus* were described without subgenera (Newton & Franz, 1998). For example, only four of ten Japanese species of *Euconnus* are placed in subgenera (Franz, 1976; Hoshina et al., 2003). As a matter of convenience, I

put the present new species in the subgenus *Euconophron* to which *E. kojiroi* sp. nov. is close.

Etymology. This new species is dedicated to a popular *samurai*, Kojirô Sasaki (?-1612), who allegedly performed the ascetic practices of the swordplay and caught on a special skill, *Tsubame-gaeshi*, at the type locality, Ichijô-daki Falls.

***Euconnus (Napochus) lewisii* Sharp, 1886**

(Japanese name: Ruisu-hime-kokemushi)

*Euconnus lewisii* Sharp, 1886, 47 (Nagasaki, Kyushu); O'Keefe & Li, 1998: 159.

*Euconnus Lewisi*: Csiki, 1919: 50.

*Euconnus lewisi*: Franz, 1976: 59.

*Euconnus (Euconophron) miyawakianus* Franz, 1976, 56 (Nara, Honshu). **syn. nov.**

*Euconnus (Euconophron) miyawakianus*: O'Keefe & Li, 1998: 159.

Specimens examined. Four syntypes of *Euconnus lewisii*, Nagasaki, G. Lewis leg. (preserved in the collection of The Natural History Museum, London). Holotype of *Euconnus (Euconophron) miyawakianus*, Mt. Kasuga, Nara, Honshu, 22. v. 1974, H. Franz leg. (preserved in the collection of Naturhistorisches Museum, Wien). Other specimens, 2 males and 2 females, Mt. Hikosan, Fukuoka Pref., Kyushu, 13. xi. 1995, H. Hoshina leg.; 2 males and 1 female, Ichijô-daki Falls, Fukui City, Fukui Pref., Honshu, 4. vi. 2002, H. Hoshina leg.

Note. Any taxonomic differences are not recognized between *E. lewisii* and *E. (E.) miyawakianus* in morphological features of antennae, basal foveae of pronotum, aedeagus, and other characters. Therefore, *E. (E.) miyawakianus* is synonymized with *E. lewisii*, here.

As already stated in the note of *Euconnus (Euconophron) kojiroi* sp. nov., it is trouble for considerable species of *Euconnus* to be placed in applicable subgenera. Hoshina (2003) expediently put *E. lewisii* in the subgenus *Napochus* based on similar morphological features to *Napochus*, for example, pronotum as a truncated cone, antennae clavate on terminal four segments, and so on. However, *E. lewisii* differs from European and American *Napochus* in that pronotum has the distinct four basal foveae.

要 約

保科英人：本州からの鞘翅目コケムシ科 *Euconnus* 属(ヒメコケムシ属)の1新種の記載と分類学的知見

福井市一乗滝から、ヒメコケムシ属に含まれる新種が発見され、本稿にて、*Euconnus (Euconophron) kojiroi* sp. nov. (和名：コジロウヒメコケムシ)と命名・記載された。学名及び和名は、一乗滝で修行し、必殺技「燕返し」を会得したとされる剣豪佐々木小次郎（?－1612）に由来する。また、ロンドンとウイーンの自然史博物館所蔵のタイプ標本を調べた結果、Franz (1976) が記載した *Euconnus (Euconophron) miyawakianus* (和名なし) は、*Euconnus lewisii* Sharp, 1886 (和名:ルイスヒメコケムシ) と同種であることがわかり、新参シノニムとして処置した。

References

- Csiki, E., 1919. Scydmaenidae. In: Schenkling, S. (ed.). Coleopterorum Catalogus, pars 12: 1-106. W. Junk, Berlin.
- Franz, H., 1976. Neue Scydmaeniden aus Japan, sowie Bemerkungen zu bekannten Arten. *Entomologische*



- Blätter für Biologie und Systematik der Käfer*, **72**: 51-60.
- Hoshina, H., 2003. Notes on the genus *Euconnus* (Coleoptera: Scydmaenidae) from Japan, part I. *Coleopterists' News, Tokyo*, (**143**): 7-11. (in Japanese)
- Hoshina, H., S. Arai, & H. Ushijima, 2003. Descriptions of two new species of the genus *Euconnus* (Coleoptera: Scydmaenidae) from Japan. *The Entomological Review of Japan*, **58**: 27-33.
- Hoshina, H. & S. Arai, 2003. Taxonomic note on the genus *Euconnus* (Coleoptera: Scydmaenidae) from Japan. *Memoirs of the Faculty of Education and Regional Studies, Fukui University, Series II (Natural Science)*, (**55**): 11-12.
- Newton, A. F. & H. Franz, 1998. World catalog of the genera of Scydmaenidae (Coleoptera). *Koleopterologische Rundschau*, **68**: 137-165.
- O'Keefe, S. T. & K.-J. Li, 1998. Review of the Scydmaenidae (Coleoptera) of eastern Asia, with particular reference to *Scydmaenus*, and description of the first scydmaenid from Hainan Island, China. *Journal of the New York Entomological Society*, **106**: 150-162.
- Sharp, D., 1874. The Pselaphidae and Scydmaenidae of Japan. *Transactions of the Entomological Society of London*, (**1874**): 105-129.
- Sharp, D., 1886. The Scydmaenidae of Japan. *Entomologist's Monthly Magazine*, **23**: 46-51.